

Application Serial No.: 10/750,637  
Applicant(s): Singh et al.

Docket No.: N.C. 84,598

### REMARKS

Claims 1-25 were pending in this application. Claims 1-16 were rejected. Claims 17-25 are currently withdrawn.

Claims 1,7, and 10 have been amended. Claims 8,9,12,13,14,15, and 16 have been canceled. Applicants respectfully submit that Claims are now in condition for allowance, as further explained below.

#### Rejection under 35 USC 102(a)

The Examiner has rejected claims 1, 4, and 6-9 under 35 USC 102(a) as being anticipated by Lee (Langmuir). The Examiner states that the reference teaches multilayer materials to degrade toxic organophosphorous compounds. The Examiner also states that in Figure 1 end capping monomers are shown and that on page 1331 column 1 polyelectrolyte layers are taught and in column 2 glass beads are taught which reads on silica particles. The Examiner then states that all the features of the claims are taught by Lee for the same function as claimed.

Applicants respectfully submit that the filing date of the present application is 12/23/2003 and that the publication date of the Lee reference is 01/23/2003. Therefore the 35 USC 102(a) rejection is obviated as concerns the invention being patented or described in a publication before the invention. Three of the authors of the Lee reference are also inventors of the present application and the other two authors also worked for the Department of the Defense under the direction of one or more of Singh, Lee, and Stanish. Therefore the 35 USC 102(a) rejection is obviated as concerns that the invention was known or used by others in this country before the invention thereof by the applicant for a patent.

Application Serial No.: 10/750,637  
Applicant(s): Singh et al.

Docket No.: N.C. 84,598

All of the information submitted in the previous paragraph can be found on the face of page 1 of the Lee reference.

Applicants respectfully submit that the present application was filed prior to the printed publication date and the authors and the inventors all worked for the US Government and for the US Department of Defense and the authors not listed as inventors were working under the direction of one or more of the inventors and as such the article discusses the inventors own work. As such, Applicants respectfully submit that the 35 USC 102(a) rejection is obviated and Applicants respectfully request reconsideration.

As further support, Applicants have enclosed a declaration under 37 CFR 1.132 establishing that the article is describing Applicants' own work. According to MPEP 715.01(c), "the applicant may overcome the rejection by filing a specific affidavit or declaration under 37 CFR 1.132 establishing that the article is describing applicant's own work." A declaration by Applicants indicating that the Applicants are the inventors and that the others were merely working under their direction is sufficient to remove the publication as a reference under 35 USC 102(a). In re Katz, 867 F.2d 450, 215 USPQ 14 (CCPA 1982) as cited by MPEP 715.01(c).

#### Rejection under 35 USC 103(a)

The Examiner has rejected claims 2, 3, 5, 10-16 under 35 USC 103(a) as being unpatentable over the combination of Lee in view of Singh.

The Examiner states that the claims differ from Lee in that they specify metal chelated catalytic particles are on the silica microparticles.

The Examiner also states that Singh (6,869,784 B2) teaches in column 2 lines 54-55 silica particles can be used as substrates for enzyme immobilization. In column 5 Cu<sup>2+</sup>-IDA was

Application Serial No.: 10/750,637  
Applicant(s): Singh et al.

Docket No.: N.C. 84,598

applied to the particles with EDTA. The Examiner then concludes that it would have been obvious to immobilize the enzymes on the substrates of Lee and to additionally stabilize the enzymes with the metal chelate of Singh because Singh teaches the metal chelate further stabilizes the same enzymes for the same function as those taught by Lee. The Examiner also states that to combine both the end capping of Lee with the metal chelate of Singh for their known function of stabilizing the enzymes with the expected result would have been obvious because the references cited herein discuss the difficulty in stabilizing the enzymes.

As discussed above, Applicants respectfully submit that the Lee reference is removed as a reference and therefore the rejection based on the Lee reference is obviated. Applicants respectfully submit that the Lee reference discusses the inventors own work and was written under the direction of one or more of the inventors and was first published after the filing date of the present application.

Furthermore, the Singh reference and the present application have a common owner, the assignee, and therefore the Singh reference is removed as a reference. The Singh reference cites the assignee as The United States of America and the assignment for the present application, recorded on 07/23/2004 on reel/frame 014893/0251 also cites the assignee as The United States of America.

As such, Applicants respectfully request reconsideration.

#### Rejection under 35 USC 112(1<sup>st</sup>)

The Examiner has rejected Claims 1-16 under 35 USC 112(1<sup>st</sup>) because the specification, while being enabling for specific polyelectrolytes and specific end capping agents, does not reasonably provide enablement for any polyelectrolyte or end-capping agent. The Examiner also

Application Serial No.: 10/750,637  
Applicant(s): Singh et al.

Docket No.: N.C. 84,598

states that in claim 7 “chemically altered derivatives” reads on most any organic compound which is not enabled by the present specification. The Examiner then states that in claim 1 “polyelectrolyte” and “end capping agent” lack enablement as it would require one of ordinary skill in this art undue experimentation to determine which such substance would work in the instant invention. Further, the Examiner states that in claim 10 “metal chelated catalytic particles” and “functionalized catalytic particles” would require undue experimentation to determine which such substance would work in the instant invention. The Examiner then states that the entire scope of the claims has not been enabled and lists several items.

Claims 1,7, and 10 have been amended. As suggested by the Examiner, Claims 1,7, and 10 have been amended and now the scope of all the claims is enabled and as such this rejection is obviated. Applicants respectfully request reconsideration.

#### Rejection under 112(2<sup>nd</sup>)

The Examiner has rejected Claim 7 under 35 USC 112(2<sup>nd</sup>) as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner then lists several items concerning claim 7 and concerning “their chemically altered derivatives”.

Claim 7 has been amended. Claim 7 now particularly points out and distinctly claims the subject matter. Applicants respectfully request reconsideration.

Application Serial No.: 10/750,637  
Applicant(s): Singh et al.

Docket No.: N.C. 84,598

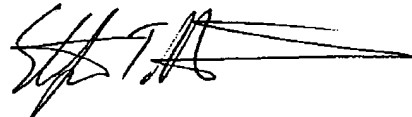
**Conclusion**

In conclusion, Applicants respectfully submit that the Examiner's Office Action has been fully responded to and that the claims are in condition for allowance. In the furtherance of compact prosecution, if a personal or telephone interview would help expedite matters, the Examiner is requested to contact Steve Hunnius at 202-404-1554.

Kindly charge any additional fees due, or credit overpayment of fees, to Deposit Account No. 50-0281.

Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,



Stephen T. Hunnius  
Reg. No. 48,304  
Naval Research Laboratory  
Code 1008.2  
4555 Overlook Avenue, S.W.  
Washington, D.C. 20375-5325  
(202) 404-1554

1/31/06